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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

FOREST INSECT INVESTIGATIONS

FOREST INSECT SURVEY REPORT

SHASTA NATIONAL FOREST AND ADJACENT PRIVATE TIMBER LANDS

Season of 1947

Forest Insect Laboratory
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Berkeley 4, California

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Distribution

2 FCC
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1 McCloud River Lumber Co.
1 Long-Bell Lumber "
1 Supervisor Shasta N.F.

FOREST INSECT SURVEY

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INTRODUCTION

The annual forest insect survey of the Shasta National Forest and adjacent private timber lands was made by R. C. Hall of the Forest Insect Laboratory, Berkeley, California in October and November of 1947. Data for this survey were collected from a limited number of permanent roadside plots, road counts and reconnaissance. Assistance on the survey was furnished by the local District Rangers and their staffs, by members of the McCloud River Lumber Company and the Long Bell Lumber Company, and members of the staff of the California State Division of Forestry. The Forest Supervisor also arranged for the use of a jeep on part of the survey.

CHARACTER OF THE 1947 INFESTATION

The character of the 1947 infestation was generally endemic for the Shasta National Forest as a whole. Losses in the virgin ponderosa pine type showed some epidemic tendencies in local areas. Losses in the mixed conifer type were endemic throughout the whole forest.

Losses in ponderosa pine resulting from attacks by the western pine beetle, Dendroctonus brevicomis Lec. and from the California 5-spined engraver beetle, Ips confusus Lec., approached epidemic proportions in a few local areas. Losses in sugar pine, from the mountain pine beetle, Dendroctonus monticolae Hopk. continued at a low endemic level but there were indications of a slight increase over losses of the past season. Losses in Douglas fir from the Douglas fir beetle, Dendroctonus pseudotsugae Hopk. and the fir flatheaded borer, Melanophila drummondi Kirby, were generally light over the whole forest. Losses in white and red fir, from the fir engraver, Scolytus ventralis Lec. were much lower than the previous season, but were still well above normal. A very serious outbreak by the sugar pine cone beetle, Conopthorus lambertianae Hopk., was observed throughout the forest. The sugar pine cone crop was light but this insect destroyed practically all of it.

INFESTATION CHARACTERISTICS ON SPECIAL AREAS

Areas where losses were epidemic, or where there were epidemic tendencies, will be discussed below by Ranger District subdivisions.

The Pit District

Losses in ponderosa pine continued to show epidemic tendencies in the Burney Flat unit on the Pit District. On the basis of permanent sample plot records collected in late October it is expected that the 1947

losses will exceed those for 1946. The bulk of this area is now under a Forest Service timber sale for the removal of all high risk trees in risk class IV. This indirect control operation is expected to give protection to this area for a period of at least 5 years.

Losses in ponderosa pine continue heavy in the Clark Creek unit near Bird Flat and west of Rock Creek in the ponderosa pine type. Many small groups were observed in this area during the fall survey. Losses in this general area have been at a relatively high level since 1944 and indirect control action through sanitation-salvage logging is urged for this area. This will be covered more specifically under recommendations.

The McCloud District

Losses in ponderosa pine are continuing at a relatively high level in most of the remaining areas of virgin timber in the ponderosa pine type in this district. The McCloud River Lumber Company is carrying on a program of direct control against the western pine beetle in the Harris Mt. Tract at the present time, and are considering the possibility of a light sanitation salvage operation through the removal of trees in risk class IV in the area next year. This should afford adequate protection for this area for atleast a 5 year period.

Losses in ponderosa pine are high endemic in the Porcupine Butte unit and the possibility of indirect control through sanitation-salvage logging should be considered for this area.

Losses are light on the McCloud Flats and no focal point of high infestation was observed during the survey.

The Goosenest District

Losses of epidemic proportions are occurring in parts of this district. Losses in the road screen along highway U. S. 97 have shown a very marked increase over those for the previous season. Losses on Head Strip #7 in the Horsethief unit, increased from 2 trees containing a volume of 1,070 board feet in 1946 to 28 trees and 11,220 board feet in 1947. Numerous groups were observed both on and off the strip. Losses in ponderosa pine showed a very marked increase in the Horsethief unit several miles north of this road screen, in the vicinity of the Old Hoffman mill and Bull Meadows. Group losses were commonly observed throughout the pure ponderosa pine type in this area. Epidemic losses are confined to the ponderosa pine type and do not extend into the adjacent mixed conifer type.

The Trinity District

The local 1946 epidemic losses from Ips subsided considerably in the vicinity of Trinity Center. It is assumed that much of this reduction was due to control action carried on in this area by the California State Division of Forestry in cooperation with local timber land owners.

RECOMMENDATIONS

The following recommendations are made for the Shasta National Forest and adjacent private timber lands. The term sanitation-salvage control as used below means the logging of all trees in risk classes III and IV.

1. Sanitation-salvage control in the Clark Creek unit to cover the pure ponderosa pine type near Bird Flat and west of Rock Creek. The ownership in this area is principally Forest Service with a limited amount of land owned by the Southern Pacific Railroad. It is estimated that from 20 to 25% of the volume is in risk classes III and IV.

2. Sanitation-salvage control in the Porcupine Butte unit. The ownership in this area is U. S. Forest Service. It is estimated that about 15% of the volume is in risk classes III and IV.

3. Sanitation-salvage control in the remaining virgin stands in the ponderosa pine type in the Horsethief unit. This area is in mixed ownership but is largely owned by the Long Bell Lumber Company and the U. S. Forest Service. It is estimated that about 25% of the volume is in risk classes III and IV.

From the standpoint of priority of projects the Horsethief area would rate No. 1, the Clark Creek area, No. 2 and Porcupine Butte area No. 3.